Part Three

Metropolis, or Modern Urban Warfare

The Global Metropolis and Strategic Anxiety

Nearly thirty years ago, it was estimated that a modern army, employing current US Army organization, training, doctrine, tactics, and materiel, would require seven years to "clear" Los Angeles.[1]

Tokyo: 28.8 million. Mexico City: 17.8 million. Sao Paolo: 17.5 million. New York: 16.5 million. Have megacities outgrown the military art? Have these urban agglomerations grown so large and so complex that they cannot by any means be traversed, subdued, occupied, or conquered?

- Is the military art up to this?
- At this moment, the answer must be no.

Urban warfare does not have its Clausewitz, nor is it ever likely to. Neither centuries of experience nor libraries groaning under the weight of case studies have been sufficient to create a reliable and practical theory of war as it is conducted in the urban environment. Professionals and amateurs alike have been forced to try it out on the ground.

But trying it out on the ground is not the best answer. It is not even a good answer. One becomes a victim of surprise. Old mistakes are repeated. Effort better spent elsewhere is wasted. The higher costs of fighting in this environment are made costlier. Time becomes even less friendly than it was. One could lose before getting it right. One has less time to win these days. One feels the weight of limitations upon the employment of national force, even as some forecasts point toward a conflict-ridden world.

The fusion of urban growth and global growth has given rise to no small degree of semiofficial hand wringing and crisis mongering. The prospect of an urbanized world excites reactionary impulses in otherwise sober minds. Only bad things can come from such a future: unwholesome congestion, crime and decadence, disease, civil strife, subversion, and even war. Global urbanization is assumed to engender conflict, some of which must inevitably blossom into real war. Of course, most of the real trouble, it is assumed, will be in the Third World.[2] Trends culminate there.

- Most of these assumptions are wrong, or wrongheaded.
- War is *not* on the rise—neither between nor within states.

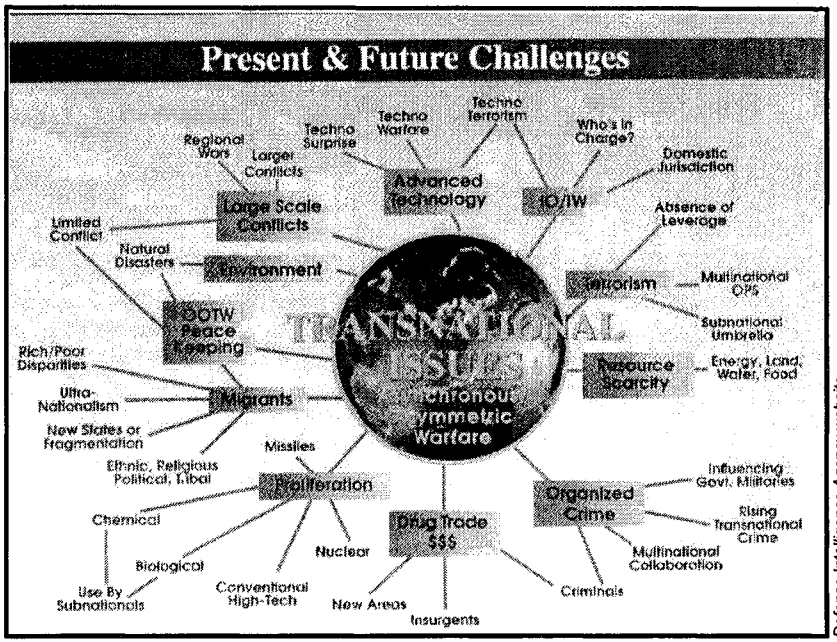
Ethnic conflicts are *not* more numerous. Conflicts often depicted as "ethnic" are actually struggles between different *cultures,* not *ethnic groups*. An accounting by *The New York Times* in 1993, which has been widely cited, appears on closer inspection to have misrepresented the ethnic nature of half of the forty-eight conflicts it recorded as being under way at the time. In fact, the term "ethnic" is now so widely misused as to have lost all meaning. When wars occur today, it appears they occur for the same reasons they have always occurred: power or territory.[3]

Acts of terrorism are *not* increasing in frequency. Terrorist attacks are at their lowest worldwide levels since the 1960s, when modern terrorism was inaugurated by the Black September movement. In March 1995, Japan's radical *Aum Shinrikyo* cult achieved instant world recognition when it killed twelve people and injured 6,000 by releasing Sarin gas in several of Tokyo's public transit stations.[4] For several days, authorities were forced to close *parts* of the city's transport system, but Tokyo could not close and did not have to close. The bombings of the World Trade Center in New York and the Murrah Building in Oklahoma City etched themselves in the national psychology, but in neither case was any lasting goal achieved. In these three instances, there is the common thread of unproductive violence: all are, paradoxically, antiwar, in that the goal was not to win but to punish. In any case, global urbanization cannot be considered as a contributing factor to these actions.

The strategic misapprehensions do not limit themselves to the general public, to the officially innocent. That is why it is necessary to return to fundamentals for the moment, in which our first task is to distinguish between that which is true of American strategy in general and that which is true of American strategy when there is a prospect of urban operations. As we have seen, even the shadow of an urban presence seems to distort perceptions that in other cases would be quite straightforward. Therefore, we should begin by briefly describing the shape of American strategy, at this point, as a series of propositions:

In the aftermath of the Cold War, the United States is the most powerful nation in the world.

- The United States is thus the first among Great Powers.



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The Laundry list

- The United States' strategy is thus a global strategy.
- The United States generally exercises its strategic power by non-military means.
- The United States has not renounced the use of aggressive force.
- The United States prefers to employ its armed forces in reaction to armed aggression.
- Having conducted a strategic retrenchment, the continental United States now exercises strategic command and control and is now the strategic base of deployment for all American military operations.
- This strategic retrenchment has given subsequent American military operations an expeditionary character.
- The expeditionary character of American military operations is in consonance with longstanding national preferences that require

limitations in terms of purpose, time, geographical extent, size of deployment, and force permitted.

Taken as a whole, these propositions aim at limiting the exercise of American military power. Indeed, a certain continuity with the fundamental principles of Cold War strategy can be detected here. Gradually conditioned by our strategic policies during the past half century, the objectives toward which today's principles are directed have more to do with the containment and suppression of war than the prosecution of it. We are not so very far, after all, from Bernard Brodie's classic formulation of deterrence, first coined in 1945: "Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other purpose."5 Within the boundaries of Brodie's "almost," nearly all of American military history since 1945 has been made.

American Strategy and the Expeditionary Option

The most intense politico-military rivalry of the Cold War occurred during its first thirty years, from 1946 to 1976. These were the "years of maximum danger," when all parties were learning how to function in a new world dominated by nuclear superpowers, and when every military action—threatened or real—contained the germ of a fatal escalation toward general war.

It was during this period that the armed forces of the United States, in particular, showed a certain talent for modern expeditionary operations. Indeed, the record is unparalleled. Between 1946 and 1976, the armed forces of the United States conducted 215 expeditionary operations. Put differently, the United States employed a significant part of its armed forces for expeditionary purposes, on average, once every other month for thirty years.[6]

Usually, these deployments lasted about ninety days. Most were relatively minor operations; that is, their objectives were limited. The troop strength of these expeditions was likewise limited. The Army was involved in thirty-nine of these expeditionary operations, commonly at a strength of at least multiple battalions, and up to more than a division on several occasions. Reserve forces were mobilized on only three occasions.[7]

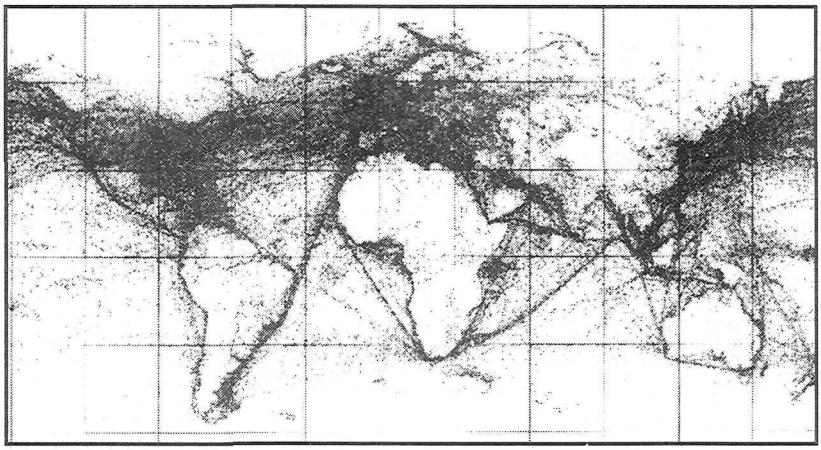
In the days before plentiful airlift and sealift, proximity to the operational area was of primary importance. This, in keeping with tradition, made naval forces the expeditionary forces of choice. In

nearly two-thirds of these expeditions, American naval forces were already close at hand, and the expedition employed whatever force was present. More than half of all the expeditions involving ground forces were conducted by the Marines. Expeditions that lasted longer sometimes excited a supplementary deployment of Army troops, as in the case of the Lebanon intervention of 1958, when more than a division was eventually sent to the area, as well as a sizeable Air Force contingent.

A goodly part of these expeditions fell into the general category of "showing the force," for which aircraft carriers were most often employed. Sixty percent of all these contingency operations were primarily conducted by the Navy, and the majority of those involved a carrier presence. But the presence of a carrier offshore, while a well-known and understood means of signaling American interest, did not affect the outcome of the operation so much as direct, on-the-ground presence by Marines or Army troops. Direct force, in other words, worked a more positive result in a shorter time than indirect force or posturing.[8]

Expeditionary operations have been the form of choice for the United States for the better part of the twentieth century, and it is easy enough to see why. An expedition promises no "foreign entanglements" because it does not usually entail a commitment beyond its immediate purpose. Ordinarily, the expected end-state is unambiguous, a problem with a solution. An expedition is not ordinarily meant to work vast changes in a local situation, although modern history is replete with examples in which foreign armies have descended upon hapless regimes in order to effect a change in rulers.

As a type of operation, the expedition takes on the air of an emergency, an unexpected mission in which certain operational preferences or material preferences are sometimes sacrificed for the sake of speed. Emergencies ordinarily demand a quick response, but whether quick or not, it is the *effective* response that is wanted in the end. Quick responses may be less desirable than effective responses, as American policymakers decided after the Iraqi invasion of Kuwait.[9] Perhaps because of this perception of a speedy operation, we commonly think of expeditions as tending toward the smaller size, but as we have seen, there is no intrinsic reason for this to be so. Expeditions can be very large, indeed, and they can also be very slow, as the American expeditionary forces in both world wars, as well as the expedition to the Persian Gulf in 1990 demonstrated. But these examples may stretch the point to breaking. The common variety of



National Defense University, Institute for Strategic Studies

An electromagnetic spectrum satellite photo of global lines of communication, 1999

expedition begins modestly and, one hopes, concludes in the same way. Ideally, the intervening party expects to enjoy the initiative throughout the course of its operation and may be retractable or expansible, as policy and circumstances dictate—for the expedition always begins its life as a strategic operation.

In the past, the expedition seems to have lent itself much more readily to direct political control than more complex or extended operations, but this advantage may be gradually disappearing in the face of quantum improvements in command and control technology. Today, the size or complexity of an operation is much less likely to shield commanders from strategic direction. Even during the Gulf War, allied forces appear to have had technical command and control capacity to spare. More than sixty Western military satellites were pressed into service along with several more commercial satellites. When the operation was in full swing, forces in theater placed 700,000 calls and 152,000 messages a day. Communications systems managed some 30,000 radio frequencies for constant service. According to one study, in at least one case, the capacity of these systems far outpaced their content: 80 percent of all intelligence traffic was reported as "redundant."[10] The implications of these technical developments are even now poorly appreciated.

Since time immemorial, soldiers have complained of "interference" from on high, of not having been given sufficient latitude to direct operations.[11] They will have much cause for complaint in the future. All the trends in modern command and control systems conduce to

more, not less, control at all echelons of action—so much so that one might well pose a new rule for soldiering in the cybernetic age: *Whatever can be controlled, will be controlled.* Strategic direction will be more intrusive—a term which implies only occasional, if annoying, interruption—but more insistent, too, more *commanding*, gradually assuming decisions once monopolized by commanders on the spot, happy that their masters were great distances away. No more.

There is one other characteristic of the expeditionary record that is operationally significant: in almost half—104 of the 215 expeditions recorded—an urban area was an intrinsic element of the operation.[12] Expeditionary operations stand an increasingly good chance of occurring in an urban area as time goes on. Expeditionary operations and urban operations, therefore, form a nexus—a crossroads of the modern military art.

Certain aspects of these operational patterns have changed since the conclusion of the Cold War. Late in 1995, the Army announced that its deployment tempos had increased by 300 percent, the result, first, of new conflicts no longer being suppressed by the Cold War, and second, of the concomitant retrenchment of strategic deployments and reductions in end strength. Although a highly dubious statistic, to say the least, it does point to an important new development in the international climate.[13] Cold War interventions were more likely to be unilateral than today, when American armed forces find themselves as part of larger multinational formations, often operating under the authority of the United Nations. Earlier, with the threat of a Soviet veto hanging over any Cold War undertaking Washington might have proposed for the UN's consideration, the United States had little choice but to act singly. And, after all, many of the American expeditions in those days were conducted as yet another move in the great bipolar superpower game.

Since the Cold War, a more compliant Russian stance in the UN Security Council has benefited the United States and the western European nations, who have found that there are certain political and operational advantages to be gained from operating under UN auspices. In what one scholar has called "the intervention dilemma," western public opinion in recent years, while disapproving in general of military intervention, also insists increasingly that "something be done" to alleviate crises. As a result, crisis intervention in the service of peacekeeping or "good offices" missions increased from ten operations a year in the 1980s to twenty operations a year in the first half of the 1990s.[14]

At the same time, a much more active United Nations contributed to a significant increase in the frequency of expeditions. Cold War barriers to unanimity in the Security Council having been resolved for the most part (although China does continue to use its veto power), the leading western nations are not only able to intervene more easily, they are willing to intervene as well. One reason is that the scruples against interfering in the internal affairs of sovereign nations, and the adherence to the right of national self-determination, are challenged by a new trend to establish and enforce certain minimal international standards of performance for member states, especially where individual human rights are thought to be in jeopardy. Interventions in the internal affairs of "failed states" have increased dramatically from five operations per year in the 1980s to seventeen per year during the 1990s.[15] It was under precisely these circumstances that the Americans found themselves leading the Unified Task Force, or UNITAF, into Somalia late in 1992.[16] One must assume, under the circumstances, that such "international taskings" as these will increase in frequency.

So much for the strategic context in which the United States now finds itself. Although the framework in which our armed forces operate today is far different from that of only a decade ago, strategic principles have not changed so much as strategic policy. Clausewitz would say that, although the ends have changed, the ways and means are not substantially different from before. The military operations launched by the United States in aid of its international objectives seem not to have changed their general form so much, falling routinely into the category of expeditionary operations broadly defined. Even Operation Desert Storm could be categorized in this way, allowing for its greater magnitude. So while the expedition is one of the most time-honored forms of military operation one could imagine, it has proved itself an infinitely flexible form of operation. At the moment, the expedition is the form of military operation that best suits the strategic canvas on which we must act for the foreseeable future. Just as earlier times have been noted for their adherence to one form of war or another, or even one operational style, it may well be that the turn of this century will be seen as a period typified by expeditionary operations. That is the premise on which we shall now proceed.

Tradition and Progress in the Military Art

In old military textbooks and field manuals, strategic purpose and direction manifest themselves at the tactical level of war. Tactics produce what strategy demands. Quite often, one finds the supposition

that a tactical success might compensate for strategic miscalculation so that no matter how far astray policy may wander, true tactical skill is what counts in the end. It is quite amazing how many modern soldiers still subscribe to this ancient vision of warfighting.

In practice, the relationships between the different levels of war bear little resemblance to textbook descriptions of whatever vintage. Perhaps these relationships are best described in more modern language as *interactive*. All the same, it is still possible for professional soldiers to superimpose upon war a kind of fictitious order as a means of dealing with these interactions. As in days of old, this approach assumes that military techniques, if properly and constantly drilled, can overcome any problem posed by process, by the enemy, or by the environment in which the fighting is to be done. For lack of a better term, we can call this the *instrumental* approach, and it is a habit that a materially rich army acquires over time. Others have called this conception of war materialistic, "force-on-force," or "attrition-oriented," but neither of these terms quite conveys the idea—*as it acts*. For Edward Luttwak in the early 1980s, such conceptions were hopelessly crude and wasteful:

> In the extreme case of pure attrition, there are only techniques and tactics, and there is no action at all at the operational level. All that remains are routinized techniques of reconnaissance, movement, resupply, etc. to bring firepower-producing forces within range of the most conveniently targetable aggregations of enemy forces and supporting structures. Each set of targets is then to be destroyed by the cumulative effect of firepower, victory being achieved when the proportion destroyed suffices to induce retreat or surrender, or theoretically, when the full inventory of enemy forces is destroyed.[17]

At the tactical level, we can recognize this conception in action when the Red Army cleared snipers during the Battle of Berlin by means of artillery, essentially the same techniques that survive today in the first and second battles of Grozny. But we can see in Luttwak's passage a prescient description of how the Americans fought the war in the Gulf at the operational level as well.[18] In essence, weight—by numbers and volume of fire—substitutes for technique. Naturally, this conception of war assigns less value to operational velocity and precise execution. Older, industrial-style armies do not have the tools necessary to execute modern warfare—and that includes intellectual tools as well. Older-style armies are attuned well enough to fight in the open field environment, where instrumentalism finds its best expression. Some armies have no choice but to operate in this way. Some armies are

struggling to break free of instrumental warfare, and some are merely struggling to preserve tradition.

For nearly two decades, the US Army has subscribed, officially at least, to the style of military thought called the operational art. In the arcane world of military theory, the operational art roughly takes the place once occupied by grand tactics. The primary function of grand tactics was simply to make possible what strategy imagined. Grand tactics, as a level of war, was defined in various ways during its heyday in the eighteenth and nineteenth centuries—for instance by geography or terrain or by relationship to enemy formations—but the fundamental use for grand tactics was that it put forces in place, at the ready, for the tactician to employ when the time came to engage the enemy. But under grand tactics, the tactical act was still an event, not a process—a sip of the wine, but not the bottle.

Grand tactics, long since lapsed into obscurity, was supplanted by the imposition of the operational art as it was conceived in the US Army in the early 1980s. But because the operational art was the principal means by which the US Army's new "AirLand Battle" doctrine of the early 1980s was explained, it has often been confused as doctrine itself. This is how the AirLand Battle was rendered officially in its fullest expression in the 1986 edition of FM 100-5:

> The object of all operations is to impose our will upon the enemy.... To do this we must throw the enemy off balance with a powerful blow from an unexpected direction, follow-up rapidly to prevent his recovery and continue operations aggressively to achieve the higher commander's goals. The best results are obtained when powerful blows are struck against critical units or areas whose loss will degrade the coherence of enemy operations in depth.[19]

As one close student of Army doctrine has observed, "AirLand Battle is an application of classic twentieth-century maneuver theory for mechanized forces."[20] The doctrine presupposed an enemy rich in numbers and material weight, organized, trained, and equipped much like oneself, but with enough of a difference to permit a qualitative edge—such as, for instance, superior training—to become the key to victory. The flow of battle imagined by the doctrine was nearly continuous. The enemy's superstructure found its strength from its echelonment to a great depth, but happily, that was where the enemy's center of gravity could be found too. But the AirLand Battle was not conceived as an attritional doctrine; finesse was critical to one's success, in fact. One had to deal the winning blow on the enemy's center of gravity by an indirect route or means.

Of course, the doctrine was specifically tailored for fighting the Soviets in NATO Europe, but it managed to travel to the Gulf War, where conditions for its application seemed appropriate. Notwithstanding its presumed success in the desert, AirLand Battle is not quite the doctrine for all seasons, nor was it ever intended to be.[21] The operational art is another matter entirely, however. As a mode of systematic military analysis, the operational art seemed equal to the demands made of it, regardless of the mission or location.

Just as with any set of complex ideas actually applied over a period of time, the operational art has been domesticated during the past two decades, worn down to a shape that practitioners could accept. Along the way, a collection of conceptual tools has evolved to assist in its application.[22] Some of these have been lifted directly from classical military theory, others from less exalted heights. All are now as deeply embedded in the Army's warfighting psyche as any in memory.

The planning and execution of the theater-level campaign was the focus of the operational art when it was conceived. The campaign plan itself was the mechanism by which strategic direction was to be translated into a highly coordinated sequence of interrelated tactical actions that would move one's war toward the attainment of strategic objectives. Second in importance only to defining one's mission was defining the enemy's "center of gravity," a notion which derived from the Clausewitzian idea that, within any enemy body, a point could be found that served as the source of all power. The center of gravity is the *sine qua non* of an enemy's capacity to resist the imposition of one's own will upon him. However, sometimes the center of gravity proved to be rather elusive, not quite as straightforwardly identifiable as one might hope. So concessions to practicality were made that permitted the modern operational artist to identify several "centers of gravity," thus making nonsense of the original idea, but verging along the way with another of these planner's tools—the concept of the "decisive point" and its subset, "objective points."

Under the terms of this concept, the seizure of decisive points permits one's forces to advance toward the center (or centers) of gravity by means of the battles and engagements already determined upon and planned for. An underlying assumption is that one will always enjoy the initiative. The operational art presupposes also that all action is always under one's positive control, even in the extremities of violence that the modern battlefield is sure to produce.

Friction—as Clausewitz defined it—will have its say, but, of course, it is acknowledged chiefly, it seems, in order to be overcome, used as a kind of theoretical straw man to prove that all eventualities have been foreseen. The operational art attempts to counteract friction chiefly by means of good planning, especially by paying close attention to the alignment of all the elements of one's own combat power in space, time, and effect—a technique ordinarily called "synchronization."[23]

Not one of these ideas was in any way original, but the way in which they were redefined, managed, and applied was new. Putting new wine in old bottles works, sometimes.

Operationalizing the Urban Campaign

As a means of expressing a particular style of war, the operational art has proved to be useful. It is better to have any concept rather than none at all, which was the state of affairs before its inception in the early 1980s.[24] Furthermore, *a concept that is completely wrong is better than no concept at all* simply because there is a chance someone will notice and attempt to correct it, to adjust toward a degree of "rightness" at least.

But we can be more generous than this. During its career, the operational art convinced the US Army that precise, integrative planning—and precisely rehearsed training—could yield favorable tactical results—results that could be anticipated, not merely hoped for. Indeed, the performance of the operational art as a means of planning and directing military action within a theater of operations has been such that one need not expect either its replacement or its revision in the foreseeable future. If the US Army is to deal with the new challenges of urbanism, therefore, it will do so within the confines of the operational art, or not at all. The operational art is here to stay.

One of the earliest proponents of the operational art, General Don Holder, has written that "theater operations fall more clearly into the domain of art than that of science. Below the level of broad principles, each situation varies so strongly in personal, geographic, demographic, historical, and economic details that the teaching of the operational art will resemble political science more than small-unit tactics."[25] Urban operations cannot be shoehorned into the operational art. If the operational art is to have any utility in this case, it must acknowledge certain realities unique to the nature, structure, and functions of such a world.

Bearing this dictum in mind, how might this knowledge be fused with knowledge of the operational art in order to "operationalize" urban campaigning? For that, we must return to the results of our earlier analysis of the urban environment, which are best considered as a set of militarily significant propositions.

First: Cities are human-built for human purposes and look and act the way they do because of this. Inevitably, some will say that, while this may be true, it is militarily irrelevant. These are the same who will say that while it is true that armies are human built for human purposes, the fact is militarily irrelevant. However, certain generalizations about cities can be made, just as certain generalizations can be made about any other shape that human aggregations take on. We may speak, for instance, of a city's morale no less reasonably than we may speak of an army's morale so that we may inform our speculations about how a city will perform under certain conditions just as we would an army or any other human aggregation. Similarly, it is not at all unreasonable to speak of a city's psychological or sociological or economic profile, just as it is reasonable to view a city in a materialistic way, as a collection of buildings, services, functions—just as we view armies materialistically, in terms of their inventories of weapons, differentiation of skills, missions, and so on. Indeed, the ways in which one may see a city, the methods by which one may analyze a city, are so extensive that no good purpose would be served here by cataloguing them; we are interested here only in those matters that are militarily important. In this instance, the most militarily significant feature of a city is its humanness. Of all facts about cities, this one is the most significant and forms the foundation of all the propositions that follow.

Next: Cities are not natural entities, in that they do not arise without human intervention upon a given natural environment. Since cities arise for the reasons of those who build them, the shape, design, and functions of a city are well within the reach of understanding, and if this is true, then cities may be analyzed on a military as well as any other basis. That is to say, an expert in transportation may analyze a city on the basis of information that is significant to his inquiry while disregarding other information that is of no significance, but the standards by which he makes these choices are choices for which he has been educated and trained. Without this education and training, his choices would be less than authoritative because they are not so much choices as guesses. In the same way, a military analysis of a city must be founded upon information that is pertinent to one's mission or tasks,

and a significant part of this analysis will derive from the character of the city itself.

Next: There is no "Emerald City," shimmering on the horizon in splendid isolation. Real cities have never and do not now exist in a vacuum. Every city exists within a physical network of other cities, towns, villages, suburbs, or exurbs. Every one of these lesser aggregations defines itself at least partly by reference to the greater city, just as the greater city defines itself, at least partly, by reference to its surroundings. This dictum has tremendous importance for urban planners; it should be no less significant for military planners. The existence of greater and lesser urban zones within mutually supporting distance should alert any military analyst or planner to how forces might be disposed.

Next: Cities are not inert. Cities do not merely react; they interact. Malfunction of public systems, catastrophes, natural disasters, civic disorder, crime, riot, insurrection, or invasion and occupation—all these produce not merely a reaction in a city but an interaction. Cities are not inert because people are not inert. Military instrumentalists prefer to regard cities as inanimate material, good only for violent rearrangement. But the human and material properties of cities enable them to fight back. The potential military application of a city's human and material properties must therefore be a leading element of any military planning that involves an urban operational area.

Next: Movement, compressed in space and time, is a normal state of a city, some of whose most important functions entail the sustainment and movement of people, goods, and information. No city can be said to operate at constant velocities, but anyone knows that certain cities have certain rhythms, peculiar to themselves—the most obvious example being the rush hours. These rhythms can be managed—indeed they are managed all the time—and they can be disrupted as well. Some of these rhythms are critical to maintaining the optimum space-time distributions to which the city has become accustomed. Because these rhythms affect more or less every inhabitant (even if the person is not going anywhere), and because they can be manipulated rather easily, they are militarily significant.

Next: At a certain point in their growth, cities attain a level of complexity that is the product of human and physical synergy. That point occurs when some degree of higher management is required. One might imagine the managerial difference between a country doctor's office and a small clinic and, at succeeding levels of complexity, a hospital, and then a medical center. Urban complexity, improperly

managed, can act as a centrifugal force in a city. The military significance of urban complexity is that its dysfunctional tendency can be accelerated. As in the medical network, the disruption of patient transfers from emergency sites or small clinics to higher rungs on the medical treatment ladder can accentuate stress on an urban system at a time of public crisis. To repeat, it is not only that there are more moving parts, it is that those parts are moving differently.

Next: The inherent social and material order of a city may be defined as urban cohesion, a form of cohesion no less substantial (and in many ways more substantial) than military cohesion. Urban cohesion manifests itself continuously and practically by acting as a counterweight to urban complexity—by acting as a centripetal force opposing complexity's centrifugal force. In essence, urban cohesion is attained in precisely the same way military cohesion is attained: when an individual subordinates oneself to a larger group in order to benefit less immediately but more reliably. Urban organization is made possible by this widespread social agreement. Urban cohesion and military cohesion are alike in that both can be manipulated with some degree of precision and from the tactical to the strategic range.

Next: Cities tend to persist. Contrary to what professional moralists would have us believe, cities do not exist in a state of entropy, degeneration, or decay. Cities possess adaptive capacities that often strain credulity. Toward the end of the latest battle of Grozny, Russian authorities estimated that upwards of 35,000 noncombatants had remained in a city where no buildings had escaped serious damage, where no regular services existed, and where movement was possible only at night, if then. This situation is not substantially different from the situation that existed only four years before. Cities are highly adaptive entities.

Next: Cities are built to operate in peace. The attributes and processes discussed here operate best in peace, but, as already noted, the stress of conflict does not automatically trigger degradation. Instead, the stress of conflict may lead these attributes and processes to "mobilize" themselves, as in the conversion of London's underground to public shelters during the Blitz. This is only an example of a city under attack, on the defensive, but armies have mobilized cities in order to launch attacks from them as well.

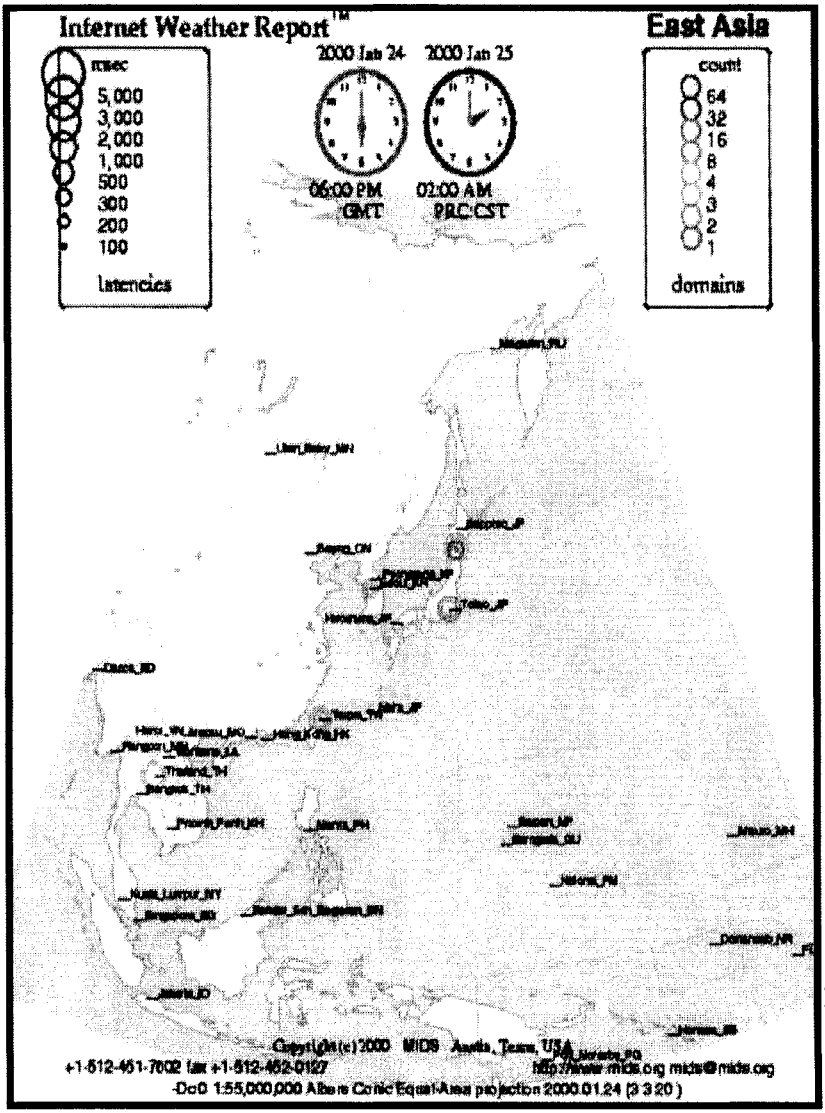
Next: A city may be divided into two parts—that which is apparent and that which is not apparent. The first consists simply of the obvious city, the city which anyone can see with an offhand glance. It is the human and material aggregation that seems to make little sense to the

casual observer, but which can, with little effort, be understood as a network of human and material systems. The second consists of the invisible city, with its cybernetic signature, which presents to the casual observer the greater difficulty in understanding. But even the invisible world is quickly becoming familiar. These new ways of perceiving an urban environment will not replace the older ways; they will simply merge with one another.

Last: Assuming these propositions are generally correct, we should return to the question of military practicality posed earlier. These propositions are interesting in their own right, but that is not the same as being operationally relevant. Nor is it the same as saying that they add in any way to the military knowledge required for dealing with modern urban conflict. We need only apply a simple test: whether any of the characteristics of urbanization discussed here are beyond the reach of manipulation. Those that are beyond our reach, we may dispose of promptly; they are interesting but of little immediate use to us. Those that remain, however, are militarily relevant.

Manipulation implies that a degree of control has been imposed over a particular environment. We may envision a case in which it is considered operationally desirable to upset an urban area's balance between complexity and cohesion. An action as simple as interrupting a central power supply *at intervals* may excite an effect that, when combined with other actions, may achieve an objective. It is enough for the purpose of this example to show that one has superceded routine controls. Those who normally control this process no longer do. The attainment and sustainment of control is the first and most important signal of success that tactics send to the operational and strategic levels of war—just as the loss of control is the first signal of failure.

Having discussed certain general characteristics of a city that may be militarily significant, we are able to consider the characteristics that are unique to cities under military stress. We are not concerned so much here with the usual sorts of trouble in which cities may find themselves, such as that caused by natural or industrial catastrophe. Civil emergency systems attend to these sorts of stress, or more extensive regional emergency alliances are called out when the disaster is too big for any one city to handle. State or national military organizations may contribute to the relief effort as well. Even in such emergencies, however, the general shape, behavior, and control of the urban area remain in force. As a general rule, the critical "line of departure" between public emergency and military operation may be when duly constituted public control no longer functions. But it is the city's



A "weather report" on the status of internet domains for East Asia, 20 January 2000

protean quality that brings us to consider its uniquely military characteristics, which can also be considered as a set of propositions:

First: Conflict militarizes a city. This may seem obvious, but the implied and real danger of conflict transforms a city so thoroughly that even local military commanders may be reluctant to rip up grand boulevards or demolish important building until it is too late. Indeed, German commanders in charge of occupied Paris in 1945 temporized their defensive operations in defiance of orders from their highest authorities. Conflict—all that it implies and entails—generates extreme stresses on any urban locality. These may be quite obvious: checkpoints and roadblocks, an increase in military traffic and a decrease in civil traffic. The normal movements of the entire city may be affected. Great avenues that carried high volumes of traffic before the conflict may be rendered entirely untenable, forcing traffic onto minor streets and, in the process, creating a vulnerable mass of people. And, of course, the most ordinary of buildings can be transformed into fortresses simply by virtue of their tactical relationship to the enemy. Other changes may be operationally important. Before the war came to Stalingrad, the primary value of the Volga River lay in its function as a great north-south axis for bulk transportation. With the onset of operations at this point of the river, the Volga became instead a great natural barrier to eastward movement. The Volga had been redefined, in effect. Perhaps we may regard these changes as obvious and straightforward, but collectively they have the power to alter an urban environment more extensively than an earthquake. The important thing to remember is that these changes do not occur "naturally" but because of military events; the changes can be either so obvious or so subtle that they will not serve as a reliable guide to the commander who is trying to understand what he is seeing. The best test, therefore, of whether a conflict has militarized an urban area is simply to ask whether military or civil authority is in control. Once that question has been answered, more exacting operational and tactical calculations can begin.

Next: Conflict internationalizes a city. After conflict in a city develops to a certain point, that city transcends its nationality and assumes a global identity. The city may be an "international" city already. Or, like Srebrinica, Mogadishu, and Grozny, the city can be quite deservedly obscure and still be elevated into global view by the conflict itself. Consider that during the Gulf War, the international press was limited to reporting mainly from Riyadh or Baghdad; yet, even under these restrictions, media operations consumed twice the available satellite bandwidth consumed by military operations. Over

one hundred nations around the globe were able to receive live broadcasts simultaneously—and there was no fighting in any city.[26] In the past, armies have enjoyed certain advantages by conducting their affairs out of public view, but it is clear enough now that practically every military operation in the future will be conducted under the glare of global scrutiny. In all probability, world viewers will be treated to real-time transmissions of tactical ground combat in the not-so-distant future.

Next: Cities, for these reasons, can no longer be isolated. The advantages of "investing" a city—physically segregating it from any hope of external support—have been nullified for the most part by the information revolution. Smaller towns, villages, settlements, and the like may still be vulnerable to quarantining from their surroundings but fall into the category of the tactical small change of larger operations—that is, they produce a limited effect for the tactical investment required.

Next: In cities, the advantage rests with the defense only at the tactical level. It is strategic or operational inferiority that drives an enemy to resort to such desperate measures in the first place. The combatant that pins all his hopes on winning by tactical means what has been denied to him by strategy is really only praying that his enemy's will is too fragile to sustain a conflict. In any case, the tactical advantage of the defense is not a permanent state of affairs; naturally, the conflict decides. Certain characteristics of modern cities—such as their increasing complexity—work against even the traditional advantages of the defense. At the strategic and operational levels of an urban mission, the offense predominates, which, *inter alia*, means that an army may be able to get into trouble faster than it can get out.

All of this is why, finally, global urbanism's power to redefine strategic and operational values should be apparent, and why those values must now be addressed.

The Campaign and the City

In keeping with the traditions of their craft, professional soldiers will want to know why urbanized areas should figure in their calculations at all? After all, when ground forces find themselves in urbanized terrain, it is commonly for transient reasons—to prop up one regime or another or to sift through the wreckage of some civil disaster. It is much more difficult to imagine putting a campaign together with a city—that is, to

imagine a campaign in which an urbanized area plays either a leading or a supporting, but nevertheless essential, role.

And in defense of their argument, professional soldiers often point to the Persian Gulf War. Few cities seem to have meant less to the course and conduct of a modern campaign than Kuwait City did during the Gulf War. Kuwait City was seized early on by lead Iraqi divisions in August 1990 and quickly handed over to lesser formations, who went about the business of looting the place and terrorizing the inhabitants in the time-honored ways. The lead divisions then resumed their advance toward the Saudi Arabian frontier. This was the movement that excited the formation of the allied coalition that, in the fullness of time, liberated Kuwait. The taking of the city with little or no resistance excited little. Real and invented outrages committed inside the city did not extend to foreign embassies or encroach in any way upon diplomatic niceties. The temporary internment of foreign nationals—including US citizens—did not seem sufficient in and of itself to warrant a war or even a relief expedition. There was to be no modern-day version of the Boxer expedition, no fifty-five days at Peking.

By the time American intelligence agencies deigned to believe their own senior analysts, the invasion of Kuwait seemed to be on the verge of becoming an invasion of Saudi Arabia as well. The prospect of 20 percent of the world's oil supply under the control of one warlord energized the international community with what seemed a proper *casus belli*.[27] Appropriately, then, when US Central Command's planners received guidance from their commander in chief (CINC), Kuwait City was nearly incidental to all planning considerations.[28] Kuwait City would serve as an excellent bait for deception and diversion spoofs. Postwar attempts to cast Kuwait City as a viable target for amphibious operations or as the objective for an allied main effort rather overdignifies the military significance of the place. The city's eventual liberation came about because it was uncovered by field operations far beyond its precincts not because of anything that happened inside the city. Kuwait City was a cat's-paw, nothing more.

Much the same could be said of Baghdad. Neither the city nor much of anything that happened inside of it—save nightly news reports from the roof of the Al-Rashid Hotel—was strategically important to the campaign. Unprecedentedly precise bombing, presumably intended to force the Iraqi regime to see the futility of its actions, did not.

The only other city to take on higher significance during this war was not even in the theater of operations. That was Tel Aviv. To this day, no

one knows what the Iraqi regime intended to achieve by attacking Israel, notwithstanding the general speculation that it was to "divide the coalition" between those who would stand to Israel's defense and those who would not. Iraq was prevented from doing much at all by the crude technological state of its missiles, which is not to say that Iraq would have done more with better missiles. Iraq had quite a functional air force, but it did not function.

The apparent relegation of all these cities to the sideline seems to have allowed the operational art what may have been its exposition in the purest possible form: a war on a sand table. It may have been the only place in the world where such operations even could have been contemplated.

The Center of Gravity

There was plenty of national strategy but not much military strategy in the Persian Gulf War, which never quite transcended the operational level. Guidance was issued, much revised through successive iterations; planning was conducted with obsessive devotion to detail; and the reputation of this approach to war was assured until the next outing. Not then or since has there been any better concept offered as a replacement. To repeat, an obsolescing concept is better than no concept at all—but not much better.

So, interestingly, the means of achieving success was settled well before strategic success was actually defined. If there was some indecision over strategic objectives, or even operational objectives, there apparently was none about the "center of gravity." The center of gravity became a kind of Holy Grail for commanders and policymakers who did not reach any sort of strategic closure. The center of gravity was the one sure thing in a junkyard of strategic concepts: the Iraqi Republican Guard was designated by the CINC as the center of gravity. It occupied pride of place in a mission statement that went so far as to identify the precise units to be destroyed: "Attack Iraqi political-military leadership and command-and-control, gain and maintain air superiority, sever Iraqi supply lines, destroy chemical, biological, and nuclear capability, destroy Republican Guard force in the Kuwaiti Theater, liberate Kuwait."[29]

As it happened, the allies did not need to destroy the Republican Guard in order to liberate Kuwait, which leaves one wondering what really was the center of gravity after all.[30] The ease with which the war was planned and executed suggests to many that the operational design

itself is more important than the elements that compose it. Some may even say that, if one does not wish a city to be relevant to a campaign, then one may simply ignore it.

Of course, this is nonsense. *A center of gravity is not something one designates but discovers.* One may imagine any number of scenarios in which the status of Kuwait City was not so incidental to operations as it was. In these cases, an operational planner would be faced with the question of whether the seizure of the city was of direct or subsidiary importance to the overall design of his operation.

Indeed, this was the very question the operational planners in the Iraqi army were required to answer at the beginning of the war. Kuwait City was critical to their plan's consummation, since Iraq's immediate strategic objective was the annexation of Kuwait. To have invaded Kuwait and declared its annexation as Iraq's "nineteenth province" without occupying Kuwait City would have been an absurdity.

The manner in which Kuwait City was taken showed no small amount of coordination and organization. Just after midnight on 2 August, three Republican Guard divisions with over 1,000 tanks crossed the frontier, making directly for the "heights" overlooking Kuwait City. Heliborne special forces assaulted the city center shortly thereafter, seizing key government installations by *coup de main.* Eleven divisions invaded Kuwaiti territory within the next four days, but Kuwait City had fallen by the evening of the first day.[31]

Of course, *coups de main* have a venerable tradition in their own right. If the invasion of Kuwait were to be translated into terms appropriate to the operational art, where would one find the center of gravity? Here, as in the US invasion of Panama the year before, the center of gravity consisted not of a place or a thing but an event: the forcible seizure of civil power by one party from another. When, at the end of Iraq's first day in Kuwait, the city was reported as secured, that meant, among other things, that no other power competed for control over the city. In other words, *the center of gravity was to be found only in the city and nowhere else.* Yet, when the allies lay their plans to overturn this state of affairs, it was not simply a matter of reversing what Iraq had done. From the allies' point of view, the solution was not to be found in Kuwait City. By then, the control of all Kuwait had passed beyond the country itself.

So, we have here, in the same war, a case in which the seizure of a city is essential to the success of a campaign, and another case in which possession of a city is incidental to the success of a campaign—and it is

the same city. The city and the war interact differently in different strategic and operational cases.

On the Employment of Friction

Interaction of any sort in any environment will produce friction, and since before Clausewitz, the elimination of friction in war has been the military theorist's dream. Better, by far, to treat it as a constant presence, however, a reality to be acknowledged.

Even though friction is a constant, it does not behave uniformly for the simple reason that those things which interact are not themselves uniform. No one would mistake the friction one experiences in jungle fighting with the friction one experiences in urban fighting. The presence of an infantry squad in a jungle environment produces a different effect than one on a street corner. Not only is the friction of urban fighting different, it is more intense, and we do not have to look far for the reasons: cities function at a higher speed and more highly compressed scale. In the same way, the possibilities for interaction between that squad on the street corner and the environment in which they are operating are more numerous and more varied than their counterparts in the jungle. As it happens, the most modern armies of the world have long since acknowledged this difference by their tactical procedures, if not their operational doctrines: one need only consider tactical "rules of engagement" that have been created for various American operations in urban areas over the past several years and compare those required for use in, for example, the Persian Gulf War.

The relationship of modern armies to friction in any environment has been *defensive*, however. That is, armies have concentrated on how to minimize the negative effect of friction or somehow avoid it. No one seems to have considered the positive effects friction offers to the army that learns how to manipulate it. Friction can be employed as an offensive tool, and as the urban environment already produces friction at high levels of intensity, it stands to reason that the army that learns how to manipulate friction to the detriment of the enemy has added an important capability to its arsenal.

The larger, more populous, and more complex the city, the better the chances for employing friction in offensive fashion. In the past, a city's size and complexity were regarded as chiefly benefiting the weaker party in an urban conflict, favoring the defensive. And, indeed, recent experience would seem to uphold this generalization. But as we have seen, the character of cities is changing, and changing at a higher

velocity than ever before. The offensive employment of friction is only one of those new approaches made possible by these developments. The intensity of friction is magnified many times in an urban environment, which is only another way of saying that small acts may have large consequences.

An example of how friction may be employed offensively is not difficult to imagine, for all that is really required is to establish a measure of control—and not even complete control—over a city's virtual or physical environment. Every city's power supply is automated to some degree, for instance, and the larger the city, the more demands for manipulating power at certain times and levels, since no city operates uniformly. Destroying this power supply would be relatively simple, and, in fact, that has been the usual manner of dealing with it, but we need not restrict our options to turning switches on or off. Technical and other means exist whereby control, or at least measures of system interference, can be inserted well before a conflict begins. For the purposes of military conflict, establishing the capacity to manipulate an adversary's power supply is infinitely superior merely to destroying it, for the simple reason that destruction does not offer the opportunity for control. And, to repeat, manipulation and control are the keys to achieving one's goals—unless one's goals are merely punitive in nature. In any case, the option to destroy is always available if the more technical approach fails to satisfy the requirements of one's campaign.

Establishing control over a metropolitan power supply is a relatively technical matter, and one might therefore be led to think that the offensive employment of friction applies only in higher technical realms, but this is not so. Here, we are concerned more with operational principles than with tactics, but the creation of friction may be as simple as creating barriers to traffic flow so as to channel movement in the directions required. A checkpoint or a roadblock may be useful for this purpose alone, not only for the usual reasons of population control. Checkpoints and roadblocks are established, of course, only after one's forces have entered an urban area, but if one wished to interrupt traffic flow *before* one's forces arrived, any number of means are available to effect physical changes in the urban landscape, from direct physical attack on roads to the wreckage of particular structures to impede or isolate traffic.

The difference between the friction created by direct physical means and that created by indirect, or remote, technical means may be strategically or operationally significant, however. Using high

explosives against a trafficway may accomplish a limited tactical goal, but as we know, the rubble of a city can pose more hazards than benefits for the offensive in the longer term. Friction engendered by technical means promises a greater degree of precise control for a longer period than simple physical destruction. In other words, it is always better to control the whole process than a single event.

These examples fall into the world of tactics, and, anyway, the seizure of a power or water supply is hardly a novel idea. But the offensive employment of friction at the strategic or operational level turns out to be not so mysterious either. Qiao Liang and Wang Xiangsui of China's People's Liberation Army (PLA) have already described in their recent work how to create strategic friction by technical, nonmilitary means—although in their view there is "nothing in the world today that cannot become a weapon." To these two military professionals, the distinction between military and nonmilitary means has disappeared. Thus, to them, the international financier George Soros' operations in the Southeast Asian markets in 1998 constituted what they call "financial warfare." And, significantly, Liang and Xiangsui are interested in the *Aum Shinrikyo* attack in Tokyo less for its actual destruction than the disruptive terror that it created.[32]

The principle remains the same: regardless of the means employed or the specific objective sought, the purpose is to improve one's own chances of control, while defeating the enemy's control. If one is on the offensive, the enemy will be in possession of one's objectives, its systems, and its processes. Imposing friction upon the enemy places him in the position of defending a trench line against distant fires: he cannot move and can only wait for the attack.

Friction is intensified in an urban context because of what might be called the "magnification effect." We can think of a city as a magnifying lens through which every one of our actions must pass as we campaign against it, or in it. If this were all that happened, we might be satisfied to say that the process of interaction was in operation, and nothing more. But when our action passes through this magnifying glass, it is refracted: our action produces a result that is more or less what we intended, but never precisely so. The magnification effect forces upon us the necessity to adjust our subsequent actions to meet the new state of affairs. In essence, the magnification effect is responsible for the difference between what we expect of our actions and what we actually manage to do. It is also responsible for actions being more important than we think they will be when we commit them. If one were campaigning in the desert, one would be much less likely to commit a

tactical act that had strategic implications than one would if operating in a city, where such chances abound.[33]

On Combat Power

The fundamental element in the creation of friction in war is physical violence, but it is a genie that soldiers long ago put in its bottle, for insensate violence is violence to no purpose. As soon as violence is harnessed to a purpose, it is under some measure of control, and the question all along has been the degree to which control is possible—the more susceptible to soldierly control violence is, the better. Then it can be a tool, not merely a force of nature. Once violence can be manipulated, the level and intensity of violence become matters for professional calculation at all the levels of war—strategic, operational, and tactical. With the advent of the operational art, the production and manipulation of combat power became an important element in the art of war beyond tactics. Now, the US doctrinal glossary defines combat power as "the total means of destructive and/or disruptive force which a Military (sic) unit/formation can apply against the opponent at a given time."[34] But this definition, in effect, demilitarizes the term, diluting the "combat" in "combat power."

In an era when scientific and technical means of waging war have outrun the use of physical force and when the employment of force is more measured and more highly controlled than ever, the modification of "combat power" as an operational idea would have happened sooner or later. Consider an early definition: "the process by which methods are selected that determine the application and utilization of combat power—the means—to achieve a desired end." Beyond the tactical level of operations, however, "combat power" is unnecessarily confining. The dimensions of *military power* have overtaken the idea that the ultimate goal is to put steel on target, especially when tactics are regarded as the realm of last resort. The commander in the field has more elements of military power at his call than elements of combat power alone. If he is operating against or within a city, he may well need all of those elements of power to accomplish his mission. If he attempts to accomplish the urban mission by combat power alone, he will likely fail.[35] Too often in conventional operations in the past, combat power—and even more specifically, firepower—has been made to compensate for shortcomings in strategic or operational vision. Yet it is clear that, in today's world, one's campaign must be well on the way to success before one's troops hit the ground. The burdens upon *combat*

power must shift rearward, in the direction of *military power*, toward preparation and away from execution as the engine of the campaign.

Fusion and the Urban Campaign

The reasons a city may become involved in a given conflict are beyond counting. A city may be subverted, defended, occupied, attacked, or wrecked—or some combination thereof, partially or mostly. Concocting an operational typology only encourages the illusion that simply listing possibilities for action is the same as understanding the purposes for which the action is undertaken—precisely the opposite of how a campaign should be designed.

During the past two decades, the process of campaign design at the operational level has become well understood in the US Army, but at the same time, technological developments have underscored a tendency for the operational level and the strategic level to fuse together. Paradoxically, this trend has accelerated when American policymakers and strategists professed themselves extremely sensitive to the dangers of operational and tactical micromanagement. A telling exchange occurred during a White House press conference on the first day of Operation Just Cause when Presidential press secretary Marlin Fitzwater was asked by a reporter, "Who's got operational control?"

"Operational control is in the Pentagon," the press secretary replied.[36]

Fitzwater did not misspeak. Only two days before, the chairman of the Joint Chiefs of Staff had been revising F-117 bombing "offsets" to 250 yards for certain targets at Rio Hato.[37] The secretary of defense, pledging to himself that he would "stay out of their hair," nevertheless reviewed all the plans for the operation, including, it seemed to the chairman, those "right down to squad level."[38]

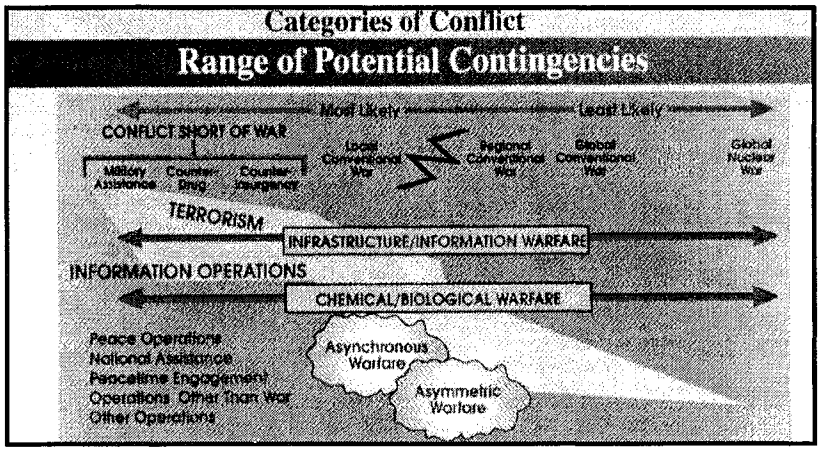
Driven by the need to justify and explain the Panama operation to the American and international public, to understand the shape of the operation in order to react to unforeseen problems, the American chain of command thoroughly violated its own policy of noninterference in field operations. In the end, these same officials would oversee the conduct of the Persian Gulf War, their experience and appetites moderated only by the much larger and more complex dimensions of that operation, and, in the end, they would congratulate themselves that they had remained true to their operational philosophy.

Yet modern strategic direction provided tools for this kind of operational oversight that were not available only a few years before. The intervening period had seen the advent of the so-called "military-technical revolution." If the tools for fusing strategic and operational direction were at hand, and if the result was a more precise application of national power, who was to say that the dead hand of history should prevent them from using those tools? During the last decade, the return to the continental United States of most forward-deployed forces, in fact, renders this a near necessity. Henceforth, American military operations abroad will be increasingly and precisely controlled from the strategic center, just as the requirement for highly controlled urban operations will come to be understood. The strategic and operational art will eventually be revised to accord with this new state of affairs.

Culmination Points, Decisive Points, Interior Lines, and Ways Ahead

The "culmination point" of an operational campaign is described in doctrinal literature as "that point in time and space when the attacker's combat power no longer exceeds that of the defender or when the defender no longer has the capability to defend successfully." Decisive points are defined as those points, not only physical, that give a commander "a marked advantage" over the enemy. Commonly, these decisive points are reached by achieving a succession of objectives, which themselves constitute a line of operations whose origin can be found at a base of operations within interior lines.[39] These definitions are sure to be useful if one intends to refight the Civil War, but as useful tools for modern American operations, their days may be numbered. Virtually every trend and development discussed in this study militates against their utility in the future. But it is one thing to declare a set of old tools less useful than they could be and quite another to find effective replacements.

Naturally, one would suspect that the scientific and technical fields that have had such an important influence in creating the present state of affairs would exercise a correspondingly important influence in the problems associated with it. No doubt, these fields have contributions to make to our understanding of the nature and conduct of urban operations—but they have not made them yet. Wargaming and simulations techniques evidently have not been able to reach into the insubstantial realms of the operational art, although they have proved themselves useful adjuncts to higher levels of training. But training,



Defense Intelligence Agency website

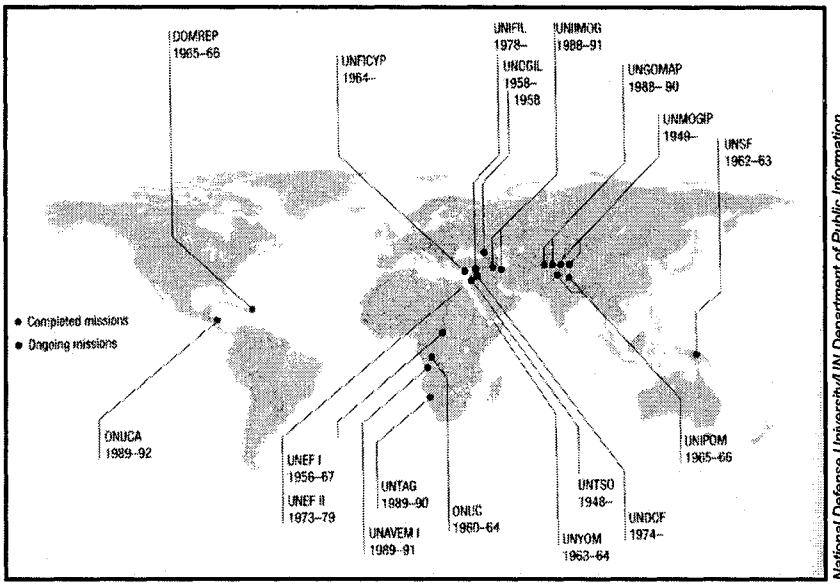
The "Full Monty"

even at the higher levels of the operational art, has its limits, fixed as it is on specific skills and straightforward operational-tactical questions. Getting at the "art" of it, as General Holder has written, is a different matter.

Turning the Sharpest Corner: Toward the "Best Available Military Thought"

Military theory is often described as nothing more or less than disciplined thinking about military affairs, and military doctrine has been defined as "the best available military thought that can be defended by reason."[40] No mind should be easily changed, especially not that of the professional soldier who has larger responsibilities. Yet no end of effort is spent telling the soldier *what* to think rather than *how* to think. Rather than specifying grand objectives for the next generation of professional soldiers, the sharpest corner of all may lie simply in putting in place the tools that will enable the soldier to see the urbanized, operational world accurately.

With one minor and recent exception, no American institution of higher military education offers instruction on urban conflict at the operational level and above. The reasons for this state of affairs should be clear to the reader by this point. These reasons are also why the chances of substantive change in the professional study of urban operations run against the odds.

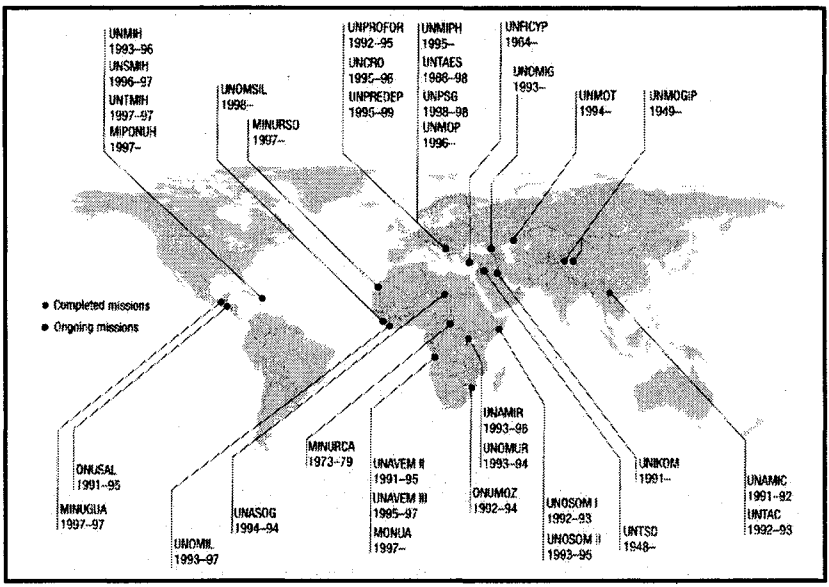


UN peace operations during the Cold War

Assume those odds might be overcome. How might the US Army prepare its field-grade and higher officers for urban operations in the future?

The first requirement for any operation is information—data. But in a world where there is a surfeit of data, where does one begin, and how does one discriminate between the data one needs to retrieve and the data one can do without for the purposes of the moment? The shelves of Army libraries the world over once groaned with a collection of "country studies" that served as a kind of "operator's dictionary" for a given nation. Contained there were general data of the sort one might find in a standard geographical reference work or encyclopedia, but specific data could be had as well—such as air and seaport "throughput capacities," communications infrastructure, and so forth. Frequently, these data were dated even before the volumes were published. Too often, however, American expeditionary planners and operators found themselves reduced to understanding their area of operations by gazing intently at an Esso map or a Michelin guide.

There is today little hope of any published form being of real assistance to operational planners or their commanders, but the appetite for operationally useful data has accelerated. There is a need for a new



National Defense University/UN Department of Public Information

UN peace operations during and after the Cold War

form of "country study," one that consists of unrestricted sources that may be accessed by technical means from the remotest locations. Data requirements could be keyed directly to the requirements of the mission, and the need for some sort of "traveling library," which may or may not be appropriate, would be eliminated. The objective, of course, is not to have all the data, merely the data one needs.

Of course, if one has no idea of the special character of the urban environment or of campaigns conducted in it, one is bound to be hard pressed to prepare in any way. As it stands now, even the manner in which the US Army depicts military symbols for purposes of control seems hopelessly old-fashioned. How, for instance, would we depict the progress of a reconnaissance that was being conducted through a sewer system? How would we depict the progress of a fight between different floors of two different buildings, one from the sixteenth floor, another from the thirty-second floor? How could we depict a fire base that had been established on the top of an eighty-story skyscraper? No doubt we could find a way to create a new glossary of symbols fit for depicting action in the three-dimensional urban environment, but none has been found yet, as far as can be discovered.

That brings us to questions of a higher magnitude. Is it likely, for instance, that strategic or operational commanders and their planners

will recognize the need to break into certain of an adversary's computer systems at the earliest possible time in the arc of a campaign, or, once broken in, what contribution this might make to the success of the larger campaign? Do strategists and field commanders know the sort of systems that should be targeted, and, indeed, how those targets should be programmed to produce maximum effect—just as one programs an air tasking order? Until we can answer these questions in the affirmative, there is a more general requirement to be met.

The reason questions of technical or even nontechnical discrimination cannot be answered now is because we have no basis in accepted professional knowledge to answer them. That basis can only be reached over a longer period, perhaps as long as a generation, by a gradual process of higher professional education. The only alternative is trial and error, but the difficulty with such an approach is that someone must make an error.

Despite the probability that a majority of the soldiers in the United States Army were brought up in an urban or near-urban environment, the possibility that they will be "natural" urban fighters is rather remote. Much more likely, they will have taken this environment and their knowledge of it for granted, as a matter beneath analysis for so long that they will have difficulty seeing its inherent military possibilities. One way—not the only way but perhaps the more reliable way—to overcome such prejudices is through the medium of professional military education, where, in the company of their peers, officers would participate in experimental seminars and exercises designed to identify professional requirements for urban campaigning—in effect, creating a new branch of military knowledge that has been left behind in the military-technical developments of the last several decades.

However, it is highly unlikely that without the intervention of the Army's leadership, from the senior levels through the commandants of its many professional schools and training facilities, the US Army will undertake these reforms in the usual course of its business. Until that occurs, the institutional knowledge and experience the Army has already acquired is likely to remain hidden away. One thing is certain, however: once, the US Army would have had the alternative of ignoring the subject altogether.

Notes

1. Elaine Babcock, et al., "Conceptual Design for the Army in the Field (CONAF III): Special Study Report: Built Up Area Conflict" (Bethesda, MD: US Army Concepts Analysis Agency, 1973), 14.

2. See Robert D. Kaplan, *The Ends of the Earth: From Togo to Turkmenistan, from Iran to Cambodia—A Journey to the Frontiers of Anarchy* (New York: Vintage Books, 1996), and more seriously, Samuel Huntington, "The West, Unique Not Universal," *Foreign Affairs* 75, no. 6 (November/December 1996): 28-46. These works, only the better known of a sizable group, did much to give shape to what can only be described as post-Cold War "free floating anxiety."

3. Yahya M. Sadowski, *The Myth of Global Chaos* (Washington, D.C.: The Brookings Institution, 1998), advances the most effective critique of the "coming anarchy" school.

4. These trends are tracked most effectively through the U. S. State Department's annual reports, "Patterns of Global Terrorism," for the years 1968 through 1998. U. S. Department of State, *Patterns of Global Terrorism, 1998* (Washington, D.C.: Department of State Office of the Coordinator for Counterterrorism, April 1999), *passim*. See also Haruki Murakami, *Underground: The Tokyo Gas Attack and the Japanese Psyche*, trans., Alfred Birnbaum and Philip Gabriel (London: Harvil Books, 2000).

5. Frederick S. Dunn, Bernard Brodie, et al., eds, *The Absolute Weapon* (New York: Harcourt Brace and Co., 1946), 76. Brodie's original essay, "The Atom Bomb and American Security," written in November 1945, became the basis of his two chapters in this work. Russell Weigley, *The American Way of War* (New York: Macmillan, 1973), 367-68, wrote that Brodie's thesis amounted to nothing less than a "revolution" in American military policy. Weigley noted further that the fact of the revolution was "easier to perceive in retrospect than it was at the time."

6. Barry M. Blechman and Stephen S. Kaplan, *Force Without War: U. S. Armed Forces as a Political Instrument* (Washington, D.C.: The Brookings Institution, 1978), 38, 44, 58. This is the most authoritative accounting of Cold War expeditionary activity by the Americans. These were significant deployments. Smaller deployments to conduct routine activities, such as those of mission training teams or advisory group deployments were not regarded as particularly significant in this accounting.

7. Ibid., 44, 53.

8. Ibid., 93, 107.

9. Bob Woodward, *The Commanders* (New York: Simon and Schuster, 1992), 222-73.

10. Allen Campen, ed., *The First Information War: The Story of Communications, Computers and Intelligence Systems in the Gulf War* (Fairfax, VA: AFCEA International Press, 1992), viii, 1, 59.

11. "No evil is greater than commands of the sovereign from the court." See Sun Tzu, *The Art of War*, trans., Samuel B. Griffith, foreword by B. H. Liddell Hart (Oxford: Oxford University Press, 1963), 81.

12. Blechman and Kaplan, *Force without War*, 547-53. This is my count, taken from the author's compendium of operations.

13. Evidently, this statistic was first used in a speech at the US Army Command and General Staff College by the Chief of Staff of the Army in the fall of 1995. The speech was reprinted in *Military Review* 75, no. 5 (September/October 1995): 4-16. The statistic appears on page 7. However, inquiries by this writer have revealed no substantial data to support this statistic, which appears to have derived wholly from two slides prepared by action officers in the US Army's DCSOPS. Nevertheless, the statistic has been used and is used today as "evidence" of a heavy "OPTEMPO." The truth is that no one knows because no one has taken the trouble to do the research.

14. Barry M. Blechman, "The Intervention Dilemma," *Washington Quarterly* 18, no. 3 (Summer 1995): 63-73.

15. Ibid., 63, 66.

16. Jonathon T. Howe, "The United States and the United Nations in Somalia: The Limits of Involvement," *Washington Quarterly* 18, no. 3 (Summer 1995): 49-62.

17. See Luttwak's acerbic indictment of attrition-oriented warfare in an article that has seminal importance for the development of modern US Army doctrines, "The Operational Levels of War," *International Security* 5, no. 3 (Winter 1980/1981): 61-79.

18. See, for instance, Richard Swain's appreciation of the conduct of the war as a whole in his *Lucky War: The Third Army in Desert Storm* (Fort Leavenworth, KS: US Army Command and General Staff College Press, 1994), 71: "The popular view of the Persian Gulf War, at least in the Army, is that it was a war of maneuver. It was nothing of the sort, at least not if 'maneuver' is viewed as the psychological undermining of an enemy by movement alone."

19. Department of the Army, FM 100-5, *Operations* (1986), 14.

20. Swain, *Lucky War*, 72.

21. Ibid.

22. It is interesting to note that the Luttwak essay, cited above, mentions none of these analytical tools. My guess is that these evolved for pedagogical reasons as the Army's School of Advanced Military Studies evolved.

23. One may find these notions conveniently summarized in James Schneider's, "The Theory of the Operational Art," *Theoretical Paper No. 3* (Fort Leavenworth, KS: US Army Command and General Staff College, 1988), which is a study guide for SAMS students about to sit their comprehensive examination.

24. I categorically reject the interpretation, forwarded by some scholars, that links the inception of the operational art in the American army during the early 1980s with intellectual forbears

in the nineteenth century. Those professional officers who were most directly involved in conceiving the operational art were not in the least interested or impressed by references to classical theories or theorists. Some of these officers were thoroughly versed in classical military theory and in military history. Others, however, were not and only began their studies of these subjects when they were tasked to participate in this effort. In effect, authoritative precedents did not exist for these officers. They knew well enough that references to precedents of any kind would not impress their audience.

25. Don Holder, "Education and Training for Theater Warfare," *Military Review* (January/February 1997): 2; this essay is a reprint of an article first published in *Military Review* for September 1990, when the author was a colonel. He retired a lieutenant general.

26. Allen D. Campen, ed., *The First Information War* (Fairfax, VA: AFCEA International Press, 1992), xviii, 87.

27. Woodward, *The Commanders,* 226-29.

28. Swain, *Lucky War,* 72-73; Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War* (Boston: Houghton Mifflin, 1993), 21, 110-11.

29. Atkinson, *Crusade*, 21. As it is now well known, the state of the Republican Guard formations served as a kind of barometer for how the war in general was progressing. The destruction of half of the RG served as the decision point for the CINC on when to launch the ground campaign.

30. Furthermore, it should be pointed out that the Republican Guards were not destroyed. All that can be said for certain is that the allies applied force to some effect or set of effects that led Iraq to shift its national strategy from the offense to the defense and its military strategy from operational and tactical defense to withdrawal.

31. Ibid., 52-53. In its mechanics, the taking of Kuwait City was not unlike the United States' invasion of Panama the year before, in which 24,000 American troops attacked twenty-eight separate targets nearly simultaneously in order to overthrow the Noriega

regime. Both operations were *coups de main*, a form particularly well suited to urban missions, based on the concept of overwhelming one's enemy before he has time to react. This approach will only work if (a) one's own force is very large and well trained, (b) one's enemy is small and less well trained, and (c) the area to be covered can be smothered by your force. In Panama City as well as Kuwait City, these conditions appear to have been met.

32. Qiao Liang and Wang Xiangsui, "Unrestricted Warfare," 17, 33-34.

33. I am referring here to genuinely strategic results, not to the sort of misadventure that becomes news and gradually festers to produce a strategic movement. The strategically significant act may be newsworthy, but it does not follow that the newsworthy is always strategically significant.

34. This definition is accepted by DOD and NATO authorities and is retrieved via the US Army Center for Lessons Learned website, 20 March 2000. The US Army definition, retrieved from the same source, adds this codicil: "A combination of the effects of maneuver, firepower, protection, and leadership."

35. This passage may cause readers to think of the Russian Army's successful capture of the ruins of Grozny during the winter of 1999-2000; as this study is being written, however, it is by no means a foregone conclusion that the Russian Army will be strategically or operationally successful. "Steel on target" may have driven the rebels from their strongholds in Grozny for the moment. The issue is very much undecided, and it is not at all clear at this remove that the Russians possess the power of decision here.

36. Woodward, *The Commanders,* 184-85.

37. The targets were the PDF barracks at Rio Hato. Ibid., 177.

38. Ibid., 176. The quote is the author's paraphrase of the chairman's remarks, evidently.

39. Department of the Army, FM 100-5, *Operations*, Glossary; US Army Center for Lessons Learned website, Internet.

40. See Sir Michael Howard, "Military Science in an Age of Peace," *Journal of the Royal United Services Institution* 119 (March 1974): 3-9; for the definition of doctrine given, see the Department of the Army, *Dictionary of Terms*, 1964.